

Breeding birds of Kothri valley, eastern Garhwal Himalayan foothills, India

DHANANJAI MOHAN and RAMAN KUMAR

In May 2008 we carried out a bird survey in Kothri valley of Lansdowne Forest Division, Uttarakhand state, India, which lies between and links two very well known protected areas, Corbett Tiger Reserve and Rajaji National Park. We recorded 150 species out of which 75 showed confirmed and 34 probable evidence of breeding. We found evidence of extension in the westward limit of the distribution of some species (Striped Tit Babbler *Macronous gularis*, Blue-winged Minla *Minla cyanouroptera*, Nepal Fulvetta *Alcippe nipalensis*, White-bellied Yuhina *Yuhina [Erpornis] zantholeuca*). We also found some species at their lowest known altitudinal breeding ranges (Slaty-headed Parakeet *Psittacula himalayana*, Little Pied Flycatcher *Ficedula westermanni*, Verditer Flycatcher *Eumiyas thalassina* and Asian Brown Flycatcher *Muscicapa dauurica*). This highlights the importance of Kothri valley as an important avifaunal habitat in the western Himalayan region.

INTRODUCTION

The Western Himalayas constitute a critical priority Endemic Bird Area (BirdLife International 2003). The western Himalayan foothills of Uttarakhand state are known for their diverse avifaunal assemblage. Knowledge of the region's bird richness mainly comes from work done at two prominent protected areas, viz. Corbett Tiger Reserve (CTR) in the east and Rajaji National Park in the west, both of which are declared Important Bird Areas (Rahmani & Islam 2004). While the bird checklist of Corbett stands at 549 (Sharma *et al.* 2003), the one for Rajaji lists 312 species of birds (Pandey *et al.* 1994). The area providing ecological connectivity between these two protected areas is a stretch of forest that is a part of Lansdowne Forest Division (Fig. 1). The most important area within this division is the valley of Kothri Rau (river), which flows in an approximately north-south direction and is accessible through a forest road which runs along the river. The avifauna of the Kothri catchment has not been studied in detail. What little published information there is comes from Ghosh & Chatterjea (2006), who surveyed the birds at Saneh, the lowest end of the valley abutting agricultural landscape in

mid-October 2003 and recorded 60 species including many winter migrants.

STUDY AREA

Kothri catchment is situated in south-eastern Garhwal in Uttarakhand state with altitude varying from 300 m to a little over 1,000 m. The forests here are moist deciduous and dominated by sal *Shorea robusta*. At the head of the valley, where altitude reaches c. 1,000 m, the vegetation has an admixture of plants from the subtropical zone with tree species like *Machilus odoratissima*, *Syzygium cumini* and *Litsea* sp. being present in large numbers. Some areas in the lower parts of the valley have been planted with teak *Tectona grandis*, an exotic to this region.

The Kothri river essentially carries the water from monsoonal rains which are active in the area from end of June to September. Later the river maintains a small flow of water throughout the winter and reduces to a trickle in summer months. The lower reaches of the river do not even have a surface flow and water is limited to pools on the low-lying stretches of the riverbed. The area is known to receive a precipitation of approximately 2,000 mm annually.

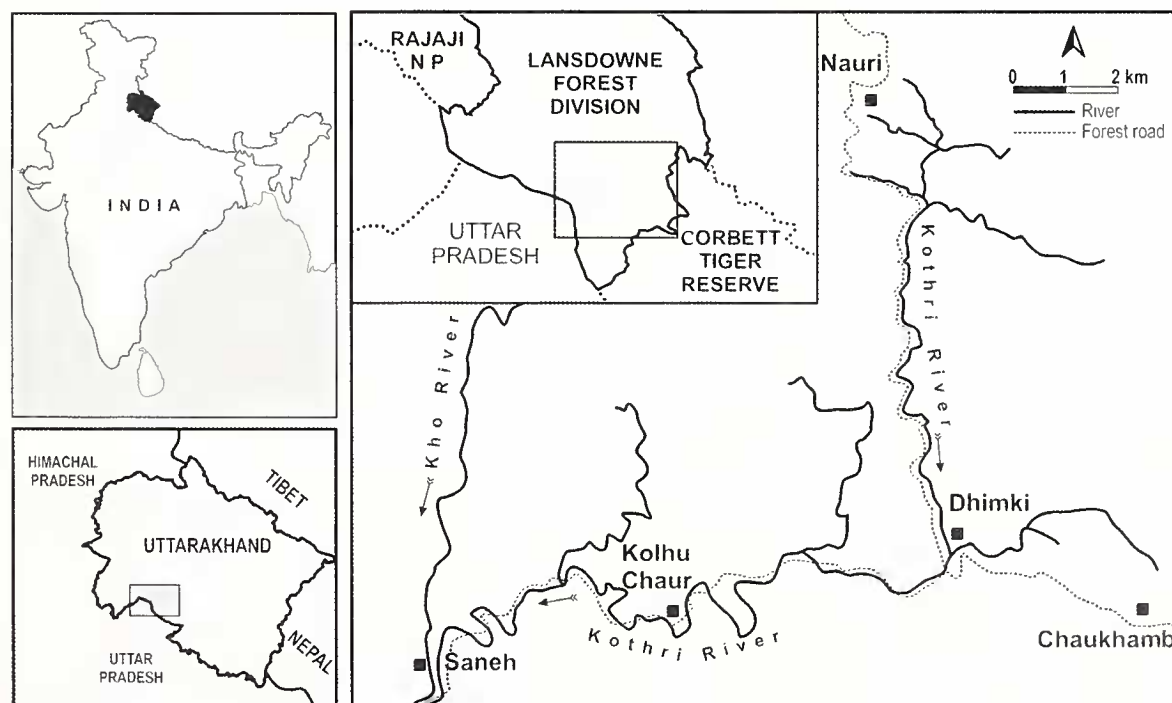


Figure 1. Location of Kothri valley, Lansdowne Forest Division, Uttarakhand, India.

METHODS

A visit to the Kothri valley was made from 21 to 26 May 2008 to collect data of birds and associated vegetation in the low-altitude forests of Uttarakhand Himalayan foothills. This survey was carried out under the Wildlife Institute of India–University of Chicago collaborative project ‘Bird species numbers and densities in East and West Himalayas’ (2007–2011). Kothri valley formed one of the many survey sites across the length of the Himalayas from Overa Sanctuary in Jammu and Kashmir in the west to Eaglenest Sanctuary in Arunachal Pradesh in the east. During the structured intensive data collection on the breeding birds of the study area of Kothri valley important observations were made at two locations, Kolhu Chaur in the lower part of Kothri valley (c.430 m) and Nauri near the head of the valley (c.860 m). In addition to these efforts, opportunistic records of birds encountered elsewhere in the valley, e.g. while approaching the intensive study locations or moving between them, or to other parts of the valley (e.g. Chaukhamb, c.600 m), were also noted. A special effort was made to record breeding-related activities of the birds encountered.

RESULTS

A total of 150 species of birds were observed during our survey of the Kothri valley. A large number of these were seen engaged in breeding-related activities. A list of birds seen during the survey along with observed breeding-related activity is annexed as Appendix. The most significant records are described below.

Westward range extensions

STRIPED TIT BABBLER *Macronous gularis*

A single bird was observed in the dense shrubs in front of the Kolhu Chaur Forest rest house. It was making the typical call and moving about in the shrubbery. The sighting seems to be the westernmost sighting of the bird. It has not been recorded from Corbett Tiger Reserve lying to the east of the surveyed area and has been known only from eastern Uttarakhand eastwards (Rasmussen & Anderton 2005).

BLUE-WINGED MINLA *Minla cyanouroptera*

Respectively, 5, 2 and 4 birds were seen in Nauri area (c.900 m) on three consecutive days. The bird has been recorded regularly from CTR but perhaps the present records are the westernmost for its distribution. Eastern Uttarakhand has been indicated as the westernmost limit of its distribution in literature (Rasmussen & Anderton 2005). Ali & Ripley (1983) mention that the species mostly breeds above 1,500 m in Nepal, which makes the present sighting the lowest known (presumed breeding) altitude in the western part of its distribution.

NEPAL FULVETTA *Alcippe nipalensis*

A pair was seen near Nauri. The birds were seen following each other, indicative of breeding. The species has not been recorded from CTR. However, there is a single record in 1991 (Sunderraj & Joshua 1997) from Guwalgarh Sot, Lansdowne Forest Division, close to Kothri valley, which led to the westward range extension. The other sightings of the species in Uttarakhand come

from eastern Kumaon (from Kumen chak, Chuka, Sharda valley, Champawat: DM pers. obs. 2005) and from Sat Tal near Nainital (A. Verma pers. obs. 2008). Rasmussen & Anderton (2005) indicate western Nepal as its western limit of distribution. The present sighting confirms the range extension for this bird to areas west of CTR into eastern Garhwal.

WHITE-BELLIED YUHINA *Yuhina [Erpornis] zantholeuca*
A pair was observed on two consecutive mornings at Nauri. This species has been recorded at CTR but west of this there is no record in literature we have seen.

Altitudinal breeding range extensions

SLATY-HEADED PARAKEET *Psittacula himalayana*

We sighted one bird feeding its young in a cavity nest at Nauri at c.900 m. Rasmussen & Anderton (2005) indicate 1,200 m as its lower breeding limit. Thus the present sighting is perhaps one of the lowest altitude breeding records for the species.

LITTLE PIED FLYCATCHER *Ficedula westermanni*

Several pairs observed in Nauri at c.900 m and along the Kolhu Chaur–Nauri road near Dhimki (c.450 m), singing profusely, and indicating that the species is very likely to be breeding. This is perhaps the lowest breeding altitude for the species since Rasmussen & Anderton (2005) indicate 1,200 m as its lower breeding limit.

VERDITER FLYCATCHER *Emmias thalassina*

At least one pair was observed with the male singing continuously at Nauri. The bird has been known to breed only above 1,200 m in Himalayas (Rasmussen & Anderton 2005) but Spierenburg (2005) gives 600 m as regular and 400 m occasional breeding altitude in Bhutan. However, the present sighting is the lowest breeding record for western Himalayas.

ASIAN BROWN FLYCATCHER *Muscicapa dauurica*

A bird was seen carrying nesting material on two consecutive mornings at c.850 m at Nauri. The bird has been known to breed only above 1,200 m in the Himalayas (Rasmussen & Anderton 2005). Ours therefore appears to be the lowest breeding record for the species.

Other significant records

GREAT SLATY WOODPECKER *Mulleripicus pulverulentus*

A pair and a flock of 10 birds were seen near Kolhu Chaur in the lower part of the valley. It is a rare bird of the region. In recent times it has regularly been seen only in the Chilla (eastern) part of Rajaji National Park (A. Harihar pers. comm. 2006) and a sighting has also been made at Thano reserve forest in Dehradun valley (pers. obs. 2008). Another sighting in the past was reported from eastern Himachal Pradesh (Jones 1919), perhaps the only one west of Uttarakhand.

DOLLARBIRD *Eurystomus orientalis*

A pair was observed in the Nauri area making flights together probably as a breeding display. There have been isolated records of this bird from Dehradun valley further west (Mohan 1997).

BLUE-BEARDED BEE-EATER *Nyctyornis athertoni*

One pair was observed at a nest hole in a road cutting at

Nauri. Both adults were seen to visit the nest repeatedly, bringing food for at least one chick.

LONG-TAILED BROADBILL *Psarismomus dalhousiae*

A single bird was observed in the riverine patch at Nauri. The species, although reported from the west up to the Dehradun valley, is rare in the region (Singh 2000).

COMMON GREEN MAGPIE *Cissa chinensis*

Except for a very old record from Dehradun valley (Osmaston 1935) and an isolated record from an area close to the present study site abutting eastern Rajaji National Park (Pandey *et al.* 1994), no records are known west of Kothri catchment. A pair and three birds, respectively, were observed on two consecutive mornings at Nauri.

BRONZED DRONGO *Dicrurus aeneus*

A few pairs were sighted in the Kothri valley including a nesting one at Nauri. The nest was about 2 m high nicely woven on a horizontal fork in dense semi-evergreen vegetation. Both the male and the female were taking turns at incubation. Further west the bird is known from isolated sightings in Dehradun valley (Mohan 2007) in west Uttarakhand.

DISCUSSION

Seventy-five of the 150 species observed by us during this survey showed confirmed breeding, with an additional 34 probably breeding. Of greater interest is the fact that we found evidence that species like Slaty-headed Parakeet, Little Pied Flycatcher and Verditer Flycatcher are using the Kothri catchment for breeding, which is perhaps the lowest altitude observed. Notably, several others (e.g. Striped Tit Babbler, White bellied Yuhina, Blue-winged Minla and Nepal Fulvetta) were observed here which indicate a westward extension of the known ranges.

Another interesting aspect of the avifauna was the turnover of species. In the Kothri valley the intensively surveyed areas (Kolhu Chaur and Nauri) were only c. 10 km apart with altitudes ranging from 400 m to 900 m. Despite this, of the 61 species recorded at the higher site at Nauri (including confirmed and probable breeders as well as transients recorded within a 5 ha intensive survey plot) 36 were not seen on the similar-sized plot at Kolhu Chaur. Similarly, of the 49 birds species seen at the Kolhu Chaur plot 24 were not seen at the higher one.

Kothri valley therefore is an important refuge for avifauna, even though the forests here are not under the formal protected area network of India. This valley, while limited in extent, harbours a remarkable diversity of birds. Perhaps it is not merely altitude that limits the range of a species and birds may suitably breed at lower altitudes

provided there is habitat continuity. The fact that the Kothri valley is oriented in a north–south direction may also explain this anomalous breeding pattern. Our study was conducted in the breeding season and we recorded 150 species. This figure is likely to magnify further during winter with the arrival of many migrant species. This underscores the importance of Kothri valley as habitat for the avifauna in the western Himalayan foothills region.

ACKNOWLEDGEMENTS

We are thankful to Director and Dean, Wildlife Institute of India for support and encouragement. Thanks are also due to Dr Trevor D. Price, our collaborator in the project, for help and funding. We are indebted to the Chief Wildlife Warden, Uttarakhand, for permitting us to work on the project and to Divisional Forest Officer, Lansdowne, for extending field support to us during the survey. We are also very grateful to two anonymous referees.

REFERENCES

- Ali, S. & Ripley, S. D. (1983) *Compact handbook of birds of India and Pakistan*. Bombay, Oxford University Press.
- BirdLife International (2003) BirdLife's online World Bird Database: the site for bird conservation. Version 2.0. Cambridge, UK: BirdLife International. Available: <http://www.birdlife.org> (accessed 31/3/2009)
- Ghosh, S. & Chatterjea, N. N. (2006) Of birds and places. *Indian Birds* 2(6): 159–161.
- Jones, A. E. (1919) A list of birds found in the Simla hills, 1908–1918. *J. Bombay Nat. Hist. Soc.* 26: 601–620.
- Mohan, D. (1997) Birds of New Forest, Dehradun, India. *Forktail* 12:19–30.
- Mohan, D. (2007) Habitat selection of birds in New forest, Dehradun, India. Ph.D. thesis. Forest Research Institute University, Dehradun.
- Pandey, S., Joshua, J., Rai, N. D., Mohan, D., Rawat, G. S., Sankar, K., Katti, M. V., Khatri, D. V. S. & Johnsingh A. J. T. (1994) Birds of Rajaji National Park, India. *Forktail* 10: 105–114.
- Rahmani, A. R. & Islam, M. Z. eds. (2004) *Important Bird Areas in India: priority sites for conservation*. Oxford University Press and Bombay Natural History Society. Mumbai.
- Rasmussen, P. C. & Anderton, J. C. (2005) *Birds of South Asia: the Ripley guide*. Vols. 1 and 2. Smithsonian Institution and Lynx Edicions, Washington, D.C. and Barcelona.
- Sharma, M., Harvey, B., Devasar, N. & Grewal, B. (2003) A checklist of birds of Corbett Tiger Reserve. Field Director, Corbett Tiger Reserve, Ramnagar, India.
- Singh, A.P. (2000) Birds of Lower Garhwal Himalayas: Dehradun valley and neighbouring hills. *Forktail* 16: 101–123.
- Spiereburg, P. (2005) *Birds in Bhutan: status and distribution*. Oriental Bird Club, Bedford, UK.
- Sunderraj, S. F. W. & Joshua, J. (1997) Range extension of the Nepal babbler (*Alcippe nipalensis*). *J. Bombay Nat. Hist. Soc.* 94: 159.

Dhuanjai Mohan, Professor, Wildlife Institute of India, P.O. Box 18, Chandrabani, Dehradun, India 248001. Email: dmohan@wii.gov.in

Raman Kumar, 36 Curzon Road, Dehradun, India 248001. Email: cyoruis@gmail.com

APPENDIX

Birds recorded in the Kothri catchment, Lansdowne Forest Division, Garhwal Himalayan foothills, 21–26 May 2008

Common name	Scientific name	Location	Breeding activity observed
RED JUNGLEFOWL	<i>Gallus gallus</i>	K, N, C, D	Calling/singing
KALIJ PHEASANT	<i>Lophura leucomelanos</i>	K, C, N	Calling/singing
INDIAN PEAFOWL	<i>Pavo cristatus</i>	K, C, D	Probably breeding
SPECKLED PICULET	<i>Picumnus innominatus</i>	N	Singing/chasing
GREY-CAPPED PYGMY WOODPECKER	<i>Dendrocopos canicapillus</i>	K, N	Chasing
FULVOUS-BREASTED WOODPECKER	<i>Dendrocopos macei</i>	K, N, C, D	Drumming
RUFIOUS WOODPECKER	<i>Celeus brachyurus</i>	K	Probably breeding
LESSER YELLOWNAPE	<i>Picus chlorolophus</i>	K, N, C, D	Calling/in pair
GREATER YELLOWNAPE	<i>Picus flavinucha</i>	C, N	Probably breeding
STREAK-THROATED WOODPECKER	<i>Picus xanthopygaeus</i>	K	Probably breeding
GREY-HEADED WOODPECKER	<i>Picus canus</i>	K, N, C, D	Drumming, pairs responding to each other
HIMALAYAN FLAMEBACK	<i>Dinopium shorii</i>	K, N, C, D	Probably breeding
BLACK-RUMPED FLAMEBACK	<i>Dinopium benghalense</i>	K	Drumming
GREATER FLAMEBACK	<i>Chrysocolaptes lucidus</i>	N	Probably breeding
GREAT SLATY WOODPECKER	<i>Mulleripicus pulverulentus</i>	K	Moving in pairs
GREAT BARBET	<i>Megalaima virens</i>	C, N	In pair; singing
BROWN-HEADED BARBET	<i>Megalaima zeylanica</i>	K	Probably breeding
LINEATED BARBET	<i>Megalaima lineata</i>	C, N	Probably breeding
BLUE-THROATED BARBET	<i>Megalaima asiatica</i>	K, C, N	Singing
COPPERSMITH BARBET	<i>Megalaima haemacephala</i>	K, N, C, D	Feeding chicks in nest
INDIAN GREY HORNBILL	<i>Ocyroceros birostris</i>	K	Male seen alone with food
ORIENTAL PIED HORNBILL	<i>Anthracoceros albirostris</i>	K, D	Probably breeding
COMMON HOOPOE	<i>Upupa epops</i>	K, C	Probably breeding
INDIAN ROLLER	<i>Coracias benghalensis</i>	K	Probably breeding
DOLLARBIRD	<i>Eurystomus orientalis</i>	N	Pairs flying together
COMMON KINGFISHER	<i>Alcedo atthis</i>	K, D	
STORK-BILLED KINGFISHER	<i>Halcyon capensis</i>	K, D	
WHITE-THROATED KINGFISHER	<i>Halcyon smyrnensis</i>	K, C, D	Probably breeding
CRESTED KINGFISHER	<i>Megaceryle lugubris</i>	K, D	
PIED KINGFISHER	<i>Ceryle rudis</i>	K	
BLUE-BEARDED BEE-EATER	<i>Nyctyornis athertoni</i>	K, N	Feeding chicks in nest
GREEN BEE-EATER	<i>Merops orientalis</i>	K, C, D	
BLUE-TAILED BEE-EATER	<i>Merops philippinus</i>	K, C, D	
CHESTNUT-HEADED BEE-EATER	<i>Merops leschenaulti</i>	K	
COMMON HAWK CUCKOO	<i>Hierococcyx varius</i>	K, N, C, D	Singing
INDIAN CUCKOO	<i>Cuculus micropterus</i>	K	Singing
EURASIAN CUCKOO	<i>Cuculus canorus</i>	K, N	Singing
BANDED BAY CUCKOO	<i>Cacomantis sonneratii</i>	N	Singing
GREY-BELLIED CUCKOO	<i>Cacomantis passerinus</i>	K	Singing
DRONGO CUCKOO	<i>Surniculus lugubris</i>	K, C, N	Singing
ASIAN KOEL	<i>Eudynamis scolopacea</i>	K	Probably breeding
GREATER COUCAL	<i>Centropus sinensis</i>	K	
ALEXANDRINE PARAKEET	<i>Psittacula eupatria</i>	K, C, D	Probably breeding

Common name	Scientific name	Location	Breeding activity observed
ROSE-RINGED PARAKEET	<i>Psittacula krameri</i>	K	On nest hole
SLATY-HEADED PARAKEET	<i>Psittacula himalayana</i>	N	Feeding chicks in nest
PLUM-HEADED PARAKEET	<i>Psittacula cyanocephala</i>	K, N, C, D	Feeding fledged chicks
RED-BREASTED PARAKEET	<i>Psittacula alexandri</i>	C	
WHITE-THROATED NEEDLETAIL	<i>Hirundapus caudacutus</i>	C	
HOUSE SWIFT	<i>Apus affinis</i>	K	On nest
ORIENTAL SCOPS OWL	<i>Otus sunia</i>	K, N	Calling, probably breeding
BROWN FISH OWL	<i>Ketupa zeylonensis</i>	D	Seen in pair, probably breeding
BROWN HAWK OWL	<i>Ninox scutulata</i>	K	Calling, probably breeding
LARGE-TAILED NIGHTJAR	<i>Caprimulgus macrurus</i>	K, N	On nest, calling
ROCK PIGEON	<i>Columba livia</i>	K	Pairing
ORIENTAL TURTLE DOVE	<i>Streptopelia orientalis</i>	K	
SPOTTED DOVE	<i>Streptopelia chinensis</i>	K, N, C, D	Pair defending nest
RED COLLARED DOVE	<i>Streptopelia tranquebarica</i>	K	
EURASIAN COLLARED DOVE	<i>Streptopelia decaocto</i>	K	
EMERALD DOVE	<i>Chalcophaps indica</i>	K, N	Singing
YELLOW-FOOTED GREEN PIGEON	<i>Treron phoenicoptera</i>	K	Pair defending nest
WEDGE-TAILED GREEN PIGEON	<i>Treron sphenura</i>	N	Singing
RIVER LAPWING	<i>Vanellus duvaucelii</i>	K	Probably breeding
RED-WATTLED LAPWING	<i>Vanellus indicus</i>	K, C, D	Probably breeding
ORIENTAL HONEY-BUZZARD	<i>Pernis ptilorhynchus</i>	K	
LESSER FISH EAGLE	<i>Ichthyophaga humilis</i>	D	
EGYPTIAN VULTURE	<i>Neophron percnopterus</i>	K	
RED-HEADED VULTURE	<i>Sarcogyps calvus</i>	K	
CRESTED SERPENT EAGLE	<i>Spilornis cheela</i>	K, N	
SHIKRA	<i>Accipiter badius</i>	K, N	
LITTLE CORMORANT	<i>Phalacrocorax niger</i>	K	
INDIAN POND HERON	<i>Ardeola grayii</i>	K	
LITTLE HERON	<i>Butorides striatus</i>	K	
WOOLLY-NECKED STORK	<i>Ciconia episcopus</i>	K	
INDIAN PITTA	<i>Pitta brachyura</i>	K, N, C, D	Singing
LONG-TAILED BROADBILL	<i>Psarisomus dalhousiae</i>	N	Probably breeding
RED-BILLED BLUE MAGPIE	<i>Urocissa erythrorhyncha</i>	K, N, C, D	Probably breeding
COMMON GREEN MAGPIE	<i>Cissa chinensis</i>	N	Probably breeding
RUFIOUS TREEPIE	<i>Dendrocitta vagabunda</i>	K	Probably breeding
GREY TREEPIE	<i>Dendrocitta formosae</i>	N	
LARGE-BILLED CROW	<i>Corvus macrorhynchos</i>	K, D	Probably breeding
EURASIAN GOLDEN ORIOLE	<i>Oriolus oriolus</i>	K	Probably breeding
BLACK-HOODED ORIOLE	<i>Oriolus xanthornus</i>	K	Probably breeding
BLACK-WINGED CUCKOOSHRIKE	<i>Coracina melaschistos</i>	K	
BLACK-HEADED CUCKOOSHRIKE	<i>Coracina melanoptera</i>	K, N	Singing
ROSY MINIVET	<i>Pericrocotus roseus</i>	K, N, C, D	On nest at Nauri
SMALL MINIVET	<i>Pericrocotus cinnamomeus</i>	K	Probably breeding
SCARLET MINIVET	<i>Pericrocotus flammeus</i>	K, N, C, D	On nest at Nauri
BAR-WINGED FLYCATCHER-SHRIKE	<i>Hemipus picatus</i>	K, N, C, D	Singing
YELLOW-BELLIED FANTAIL	<i>Rhipidura hypoxantha</i>	N	Singing and displaying

Common name	Scientific name	Location	Breeding activity observed
WHITE-THROATED FANTAIL	<i>Rhipidura albicollis</i>	K, N, C, D	Probably breeding
WHITE-BROWED FANTAIL	<i>Rhipidura aureola</i>	K	Probably breeding
BLACK DRONGO	<i>Dicrurus macrocercus</i>	K	
WHITE-BELLIED DRONGO	<i>Dicrurus caerulescens</i>	K	
BRONZED DRONGO	<i>Dicrurus aeneus</i>	N	Incubating
SPANGLED DRONGO	<i>Dicrurus hottentottus</i>	K, C, D	In pair; singing
BLACK-NAPE MONARCH	<i>Hypothymis azurea</i>	K	In pair; singing
ASIAN PARADISE-ELYCATCHER	<i>Terpsiphone paradisi</i>	K, N, C, D	Feeding chicks in nest
COMMON IORA	<i>Aegithina tiphia</i>	K, D	In pair; singing
LARGE WOODSHRIKE	<i>Tephrodornis gularis</i>	N	
BLUE-CAPPED ROCK THRUSH	<i>Monticola cinclorhynchus</i>	N	
BLUE WHISTLING THRUSH	<i>Myophonus caeruleus</i>	K, N, C, D	Singing
ORANGE-HEADED THRUSH	<i>Zoothera citrina</i>	K, N, C, D	Singing
ASIAN BROWN FLYCATCHER	<i>Muscicapa dauurica</i>	N	Carrying nesting material
LITTLE PIED FLYCATCHER	<i>Ficedula westermanni</i>	D, N	Singing/chasing
VERDITER FLYCATCHER	<i>Eumyias thalassina</i>	N	Singing
BLUE-THROATED FLYCATCHER	<i>Cyornis rubeculoides</i>	K, N, C, D	Singing, chasing
GREY-HEADED CANARY FLYCATCHER	<i>Culicicapa ceylonensis</i>	N	Singing
ORIENTAL MAGPIE ROBIN	<i>Copsychus saularis</i>	K, N, C, D	Singing, displaying, carrying nesting material
WHITE-RUMPED SHAMA	<i>Copsychus malabaricus</i>	K, N	Singing, on nest hole
INDIAN ROBIN	<i>Saxicoloides fulicata</i>	K	In pair
SPOTTED FORKTAIL	<i>Enicurus maculatus</i>	N	
PIED BUSHCHAT	<i>Saxicola caprata</i>	K	In pair
CHESTNUT-TAILED STARLING	<i>Sturnus malabaricus</i>	K, C, N	Singing, on nest hole
BRAHMINY STARLING	<i>Sturnus pagodarum</i>	K	
COMMON MYNA	<i>Acridotheres tristis</i>	K	On nest hole
JUNGLE MYNA	<i>Acridotheres fuscus</i>	K	
CHESTNUT-BELLIED NUTHATCH	<i>Sitta castanea</i>	K, C, N	Singing, feeding chicks in nest
VELVET-FRONTED NUTHATCH	<i>Sitta frontalis</i>	K, C, N	Singing, feeding chicks in nest
GREAT TIT	<i>Parus major</i>	K, N, C, D	Singing, feeding chicks in nest
BLACK-LORED TIT	<i>Parus xanthogenys</i>	N	
BLACK-THROATED TIT	<i>Aegithalos concinnus</i>	N	
PLAIN SAND MARTIN	<i>Riparia paludicola</i>	K	
BLACK-CRESTED BULBUL	<i>Pycnonotus melanicterus</i>	C, N	
RED-WHISKERED BULBUL	<i>Pycnonotus jocosus</i>	K	
HIMALAYAN BULBUL	<i>Pycnonotus leucogenys</i>	K, N, C, D	Probably breeding
RED-VENTED BULBUL	<i>Pycnonotus cafer</i>	K, N, C, D	Display
ASHY BULBUL	<i>Hemixos flavala</i>	C, N	Carrying nesting material
BLACK BULBUL	<i>Hypsipetes leucocephalus</i>	N	Young begging for food
GREY-BREASTED PRINIA	<i>Prinia hodgsonii</i>	K, N, C, D	In pair; singing
ORIENTAL WHITE-EYE	<i>Zosterops palpebrosus</i>	K, N, C, D	In pair; singing
PALE-FOOTED BUSH WARBLER	<i>Cettia pallidipes</i>	K, N	Singing
COMMON TAILORBIRD	<i>Orthotomus sutorius</i>	K	Singing
GREY-HOODED WARBLER	<i>Seicercus xanthoschistos</i>	N, C, D	Singing, young begging for food
WHITE-THROATED LAUGHINGTHRUSH	<i>Garrulax albogularis</i>	N	Courtship
WHITE-CRESTED LAUGHINGTHRUSH	<i>Garrulax leucolophus</i>	K, N	

Common name	Scientific name	Location	Breeding activity observed
PUFF-THROATED BABBLER	<i>Pellorneum ruficeps</i>	K, N	Singing
RUSTY-CHEEKED SCIMITAR BABBLER	<i>Pomatorhinus erythrogenys</i>	K, N	Singing
WHITE-BROWED SCIMITAR BABBLER	<i>Pomatorhinus schisticeps</i>	N	Singing
BLACK-CHINNED BABBLER	<i>Stachyris pyrrhops</i>	K, N, C, D	Singing
STRIPED TIT BABBLER	<i>Macronous gularis</i>	K	Singing
JUNGLE BABBLER	<i>Turdoides striatus</i>	K	Probably breeding
RED-BILLED LEIOTHRIX	<i>Leiothrix lutea</i>	K, N, D	In pair; singing
BLUE-WINGED MINLA	<i>Minla cyanouroptera</i>	N	Carrying food
NEPAL FULVETTA	<i>Alcippe nipalensis</i>	N	In pair; singing
WHITE-BELLIED YUHINA	<i>Yuhina [Erpornis] zantholeuca</i>	N	In pair; agitated
PURPLE SUNBIRD	<i>Nectarinia asiatica</i>	K	Singing
CRIMSON SUNBIRD	<i>Aethopyga siparaja</i>	K, N	With nesting material
CHESTNUT-SHOULDERED PETRONIA	<i>Petronia xanthocollis</i>	K	Probably breeding
WHITE-BROWED WAGTAIL	<i>Motacilla maderaspatensis</i>	K	Probably breeding
PADDYFIELD PIPIT	<i>Anthus rufulus</i>	K	Probably breeding

Location key

Code	Place name	Elevation surveyed
K	Kolhu Chaur	400–460 m
C	Chaukhamb	600 m
D	Dhimki	450 m
N	Nauri	750–920 m